CORNELL EXTENSION BULLETIN 670 REPRINTED NOVEMBER 1955

FOOD VALUE CHART

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In this chart, the protein, minerals, and vitamins are expressed in percentages of the amount recommended for an active man as furnished by the amount of food stated (usually one serving). We have grouped foods in this chart much as they are grouped in the National Food Guide or Basic 7, i.e. as (1) green and yellow vegetables, (2) citrus fruits and other foods high in ascorbic acid, (3) other vegetables and fruits, (4) dairy products, (5) meats, poultry, fish, dry beans, peas, nuts, eggs. With group 6, bread, cereals, flours, we have included some unenriched products as well as enriched and whole grain products, so that the food values of these may be compared. Similarly, in group 7, values are included for fats and oils which contain no vitamin A as well as for butter and fortified margarine. An eighth group, sweets, has been added. Within each group of foods, figures for the nutrient most often associated with the group are arranged in descending order, i.e. items in the group of green and yellow vegetables are arranged in order of vitamin A value; items in the groups of citrus fruits and other vegetables and fruits are arranged in order of ascorbic acid content.

Since no two foods have identical values, the figures chosen for each group of foods may not fit equally well all items included in the group. Some of the differences in the nutritive values of foods are caused by variety, methods of storage, growing conditions, and preparation. Therefore, any table of average food values indicates only the approximate amount of each nutrient you may expect to obtain from a serving of the food.

With the help of this chart you can (1) learn the special values of each group of foods, (2) select good sources of a given nutrient and, (3) estimate roughly the amounts of various nutrients in a diet to compare with the recommended dietary allowances as listed in table 1.

To learn the special values of a group of foods: Find the food group in the left hand column. Read across the page. Figures representing important sources of each nutrient are printed in bold face type. Thus in the group of green and yellow vegetables, carrots, winter squash, and pumpkin are good sources of vitamin A value and contribute relatively little of other nutrients, whereas the cooked leafy greens are good sources not only of vitamin A value but of iron, vitamin C, and riboflavin also.

Used in this way, the chart should help you to understand the Basic 7 and to see that the foods in each group are similar in their important contributions although they vary appreciably in food value. If you know the relative nutritive values of various foods, you need not adhere too closely to a rule of thumb such as the Basic 7, but will be able to substitute intelligently when there are shortages or surpluses of certain food groups.



NUTRITIVE VALUE OF

	Foods	Amount	Energ Calori	Pre	
-		1			
	I. Green and Yellow Vegetables		Numbe	Pe	
	Sweet Potato	5 ounces, 1 medium	185		
	Chard, Kale, Spinach		25		
	Carrots, Winter Squash, Pumpkin		35		
	Broccoli		25		
	Leaf Lettuce	2 ounces, 1 serving	10		
	Green Asparagus, Green Snap Beans		20		
	Peas, cooked		70	-	
	Green Peppers, cooked	. 2 ounces, 1 medium	15		
	II. Citrus Fruits, and Other Foods High in Ascorbic Acid			П	
	Grapefruit, Orange, Lemon, or Straw-				
	berries, juice or pulp	1/2 cup, 1 serving	50		
	Cantaloupe	. 3½ ounces, 1/4 of one	20		
	Cabbage, raw		10		
	Pineapple, fresh		50		
	Tomatoes	3½ ounces, 1/2 cup, scant	20	-	
	III. Other Vegetables and Fruits				
	Vegetable s				
	Brussel Sprouts, cooked Cabbage,				
	Cauliflower §		25		
	Rutabagas, Turnips	3½ ounces, 2/3 cup	30		
	Potatoes, Irish	5 ounces, 1 medium	120		
	Green Lima Beans		95	-	
	Beets, Parsnips, Onions		45 85		
	Corn, Sweet Eggplant, Summer Squash		20	-	
	Cucumber, Head Lettuce	2 ounces, 1 serving	10		
	Fruits				
	Blackberries, Blueberries, Raspberries	3½ ounces, 3/4 cup	60		
	Bananas	One	90		
	Apricots, Peaches (raw)		50		
	Pineapple, canned	3½ ounces, slice	80		
	Apples, Cherries, Pears, Plums	3½ ounces, 1 serving 3½ ounces, 2/5 cup	60		
	Rhubarb or Cranberry Sauce, sweetened Grapes, Grape Juice	3/2 ounces, 2/3 cup	175 70	-	
	Apricots, dried, unsweetened		100		
	Dates, Figs, Prunes, Raisins		90		
	IV. Dairy Products				
		1	145		
	Milk, whole, pasteurized		165 90		
	Chase American chadder	1 ounce	115	9	

F ME COMMON FOODS*

Foo		Minerals		Vitamins						
Energ Calori	Protein	Calcium	Iron	Vitamin A	Thiamine	Riboflavin	Ascorbic Acid			
	Percentage of the amount recommended for a physically active man per day +									
Numbe	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent			
185	3	6	10	200	6	3	35			
25	3	1	20	150	3	10	35			
35	3 3 3	3	6	150	3	3 6	6			
25	3	10	10	50	3	6	70			
10	-	3	6	20	3	3	10			
20	3	3	6	15	6	6	15			
70 15	6	3	15	15	15	6 3	20			
15	-	-	3	10	3	3	75			
50	_	3	3	_	3	3	70			
50 20	-	3	3	60	3	3	40			
10	-	3 3 3 3	3 3 3	-	3 3 3 6	3 3 3 3	35			
50 20	-	3	3	3 20	6	3	30			
20	-	3	6	20	3	3	25			
25 30 120 95	3	3 6	10	3 §	3	3 3 3 6 3 6 3	35 25			
120	3	3	10		10	3	25			
95	6	6 3 3 3	15	- 6	10	6	20			
45	6 3 3	3	6	-	3 6 3	3	10			
85		-	6	6	6	6	10			
45 85 20 10	-	-	6 6 3 3	6 3 3	3	3	10			
60	3	3	6	3	3	3	30			
90	3	-	6	3 10	3	3 3 3	15			
60 90 50	-	-	6	20	3 3 3 3	3	10			
80	-	3	6	3	3	-	10			
60	-	-	3	3	3	3	6 6 3 3			
175	-	-	3	-	3	- 2	6			
70	3	-	3	60	3	3	3			
80 60 175 70 100 90	-	3 3	3 3 15 10	-	3	3 3 3	-			
165 90 115	13 13 11	36	2 2	8	6	26 26	4			
90	13	36		-	6	26	4	-		
100	20	26	2	8	-	8	-			

	Milk, skimmed, Buttermilk	1 cup	90
	Cheese American cheddar	1 ounce	115
17.4	waith I inducts	_1.1/2.eue,	100
	Milk, whole, pasteurized	1 cup	165
	Milk, skimmed, Buttermilk	1 cup	90
	Cheese, American cheddar	1 ounce	115
	Cheese, cottage	3½ ounces, scant 1/2 cup	100
	Ice Cream, vanilla	2/3 cup	200
	Cream, coffee (20 per cent fat)	1/4 cup	120
٧.	Meats, Poultry, Fish, Dry Beans, Peas, Nuts, and Eggs	V 300×	
	Meats and Poultry (weighed as purchased)		150
	Beef, Lamb, Veal, Poultry	1/4 sound 1 serving	
	Pork	1/4 pound, 1 serving 1/4 pound, 1 serving	300 300
	Liver	3 ounces, 2 slices	120
	Heart	3 ounces, 1 serving	100
	Tongue, medium fat	3 ounces, 3 slices	200
	Fish (weighed as purchased)		
	Low fat, e.g. Cod and Haddock	1/4 pound, 1 serving	80
			The second secon
	Medium fat, e.g. Halibut	1/4 pound, 1 serving	125
	High fat, e.g. Salmon◊ and Tuna	1/4 pound, 2/3 cup	175 100
	Oysters	1/2 cup, 1 serving	
	Eggs	One, medium	75
	Dry Beans and Peas, Nuts		
	Beans, Peas	1 ounce dry, 1/2 cup	100
	Nuts, (including Peanuts and	cooked	
	Peanut Butter)	1/2 ounce, 1 tablespoon	100
VI.	Breads, Cereals, and Flours		
	Bread, whole wheat or enriched	1 slice	65
	Flour, enriched or whole wheat	1 cup	400
	Flour, cake, pastry	1 cup	365
	Whole grain breakfast Cereals,	1 ounce dry or	
	converted or brown Rice	3/4 cup cooked	100
	Cornmeal, Crackers, Farina, Macaroni,	1 ounce dry or	
	Noodles, Rice, Spaghetti	3/4 cup cooked	100
VII.	Fats and Oils		
	Butter, Fortified Margarine	1 tablespoon	100
	Cooking Fats, Salad Oils	1 tablespoon	115
	Mayonnaise	1 tablespoon	100
	Bacon, broiled	1/2 ounce, 2 strips	100
	Raw Bacon, Salt Pork, Fatback	1 ounce	180
VIII.	Sugars, Molasses, and Chocolate		
	White Sugar	1 cup	770
	Molasses	1 cup	770
	Chocolate, unsweetened	i cop	140

^{*}The figures in this chart have been adapted from those in "The Composition of Foods," As ure †The amounts recommended for a 25-year-old man, i.e. values equal to 100 per cent in this care 5000 l.U. vitamin A, 1.6 mg. thiamine (vitamin B₁), 1.6 mg. riboflavin, and 75 mg. ascorbic (vit

etaile

⁵⁰⁰⁰ I.U. vitamin A, 1.6 mg. thiamine (vitamin B₁), 1.6 mg. riboflavin, and 75 mg. ascorbic Dark green leaves all contain calcium but in some cases this is not available. Consult a r SAny of the vegetables in this group which are green would have more vitamin A value than

Olf soft bones are eaten, calcium value is higher than is indicated. Red salmon is higher in the Some of these foods may be enriched; if they are, the label on the package will include this may

100	20				1		1
90 115 100 200 120	13	36	2 2 2 2	8	6	26	4
90	13	36	2	-	6	26	4
15	11	26	2	8	-	20	-
00	30	12	- P	10	3	12	
120	6	15 8	-	10	The state of the s	5	-
120	3	0	-	10	-	3	-
150 300 300 120 100 200							
300	30	-	20	-	35	10 15	-
300	30	-	20 35	600	10	140	20
100	25 20	-	30		25	40	20
200	20	=	20	-	6	15	-
00	25		,		2		
125	25	-	6	-	3	6	-
175	25	3◊	6 10	3◊	3	6	-
80 125 175 100	25 20	15	55	6	10	15	=
75	10	3	10	10	3	10	-
100	10	3	15	_	6	3	-
100	6	3	3	_	3	-	_
65	3	3	3 27	_	4	3	·
65 400	18	3	27	-	30	18	-
365	10	-	3	-	3	3	=
100	6	-	6	-	6	3	-
100	3	-	3¶	-	3¶	-1	-
100	_			10	-	-	_
115	0	0	0	0	0	0	0
100			7		-		
100 115 100 100 180	6 3	=	3 3	0	6	3	0
180	3	-	3	0	6	3	0
770	0	0	_	0	0	0	0
770	-	120	160	0	20	15	0
140	3	-	10	-	-	3	0

26

than her in de thi ted. in A than the other fish in this group. mation. To select good sources of a given nutrient: Find the nutrient at the top of the column. Read downward, noting food groups for which the figures are relatively large, especially the figures in bold face type. Thus you will see that fruits and vegetables are our chief sources of vitamin C, and that other foods provide little or none. If citrus fruits and tomatoes are scarce or expensive, a good selection of other fruits and vegetables will meet the need for this vitamin.

To estimate roughly the amounts of various nutrients in a diet: Write down, as accurately as you can, the amounts of various foods eaten in a day by the family member about whose diet you are particularly concerned. To save time in calculating, add together all like items, such as the number of slices of bread or number of cups of milk. Using the figures in the chart, calculate the approximate values for each kind of food. For example, if a 5-year-old child has had 3 cups of milk in the day, write down 39 under protein, 108 under calcium, 6 under iron, 24 under vitamin A, 18 under thiamine, 78 under riboflavin, and 12 under ascorbic acid. When you have calculated all the food items eaten in one day by the particular person concerned, compare the totals for one day with figures in table 1, which represent the appropriate allowances. Thus, to meet the allowances for a 5-year-old child, protein should total at least 77, calcium 125, iron 67, and so on. A daily average for foods eaten on several days will give you a better idea of the nutritive value of the diet than will figures for one day only.

We did not express the calorie values of the foods as percentages of the recommended allowances because the caloric needs of individuals vary so greatly with their size and activity. The easiest way to judge whether or not you are getting enough calories, provided the rest of the diet is adequate, is to observe your body weight. If a normal person eats more calories than he needs, the excess will be deposited as body fat; if too few calories are eaten, he will not have enough body fat for good health.

Even though we recognize that the calorie values of products such as pies and cakes vary widely depending on the ingredients used, an approximate figure for some of the higher calorie dishes is often useful. Following are a few examples: ¹

FOOD	AMOUNT	CALORIES
Meat or cheese sandwich	2 slices of bread	200-300
Pie	1/7 of a 9-inch pie	250-400
Jams or jellies	1 tablespoon	50
Candy	1 ounce	100-150
Carbonated beverage	7-ounce bottle	95
Butter cake, frosted	1 2-inch square	250-350
Sponge or angel cake, unfrosted		125
Pudding such as cornstarch, tapioca, etc.	1/2 cup	200

For more detailed information consult: Food Values in Common Portions. U.S.D.A., Bureau of Human Nutrition and Home Economics, Washington, D. C. April 1951.

Table 1. The Score, or Percentage, Recommended for Each Member of the Family

				Minera	als	Vitamins				
Age	Weight	Height	Protein	Calcium	Iron	Λ	Thia- mine*	Ribo- flavin	Ascor bic Acid	
Men*	lb.	in.								
25	143	67	100	100	100	100	100	100	100	
45	143	67	100	100	100	100	88	100	100	
65	143	67	100	100	100	100	75	100	100	
Women*										
25	121	62	85	100	100	100	75	88	94	
45	121	62	85	100	100	100	63	88	94	
65	121	62	85	100	100	100	63	88	94	
Pregnant	(last 3 m	10.)	123	188	125	120	94	125	133	
Nursing	(28 fl. oz.)	154	250	125	160	94	156	200	
Children	up to 9 y	earst								
10 mo 1	yr.\$ 22	30	54	125	50	30	32	56	40	
1-3	27	34	62	125	58	40	38	. 63	47	
4-6	40	43	77	125	67	50	50	75	67	
7-9	59	51	92	125	83	70	63	94	80	
Boyst										
10-12	78	57	108	150	100	90	81	113	100	
13-15	108	64	130	175	125	100	100	131	120	
16-20	139	69	154	175	125	100	119	156	133	
Girlst										
10-12	79	57	108	150	100	90	75	113	100	
13-15	108	63	123	163	125	100	81	125	107	
16-20	120	64	115	163	125	100	75	119	107	

^{*} Allowances are for active adults of the height, weight, and age stated. Since thiamine allowances vary with food energy needs, thiamine allowances for young adults may be generous for the "white-collar" worker.

To compare the recommended allowances for various family members: In table 1, recommended allowances for protein, minerals, and vitamins are expressed in percentages of the amount recommended (table 2) for an active 25-year old man, 5 feet 7 inches tall, weighing 143 pounds.² The diet of such a man meets the recommended allowances for the nutrients listed if it scores 100 or more for protein, 100 or more for each mineral and vitamin, and supplies enough calories to maintain a satisfactory weight.

Look down the column under each nutrient, and compare the figures given for various family members. Note, for example, that protein allowances for adolescent boys and girls are greater than the father's protein allowance, and that the mother, when she is pregnant or nursing a baby, needs more calcium than any other family member.

[†] Allowances for children are based on the needs for the middle year in each group (as 2, 5, 8, etc.) and are for moderate activity and for the height and weight stated.

In this table, allowances for younger infants have been omitted. At 10 months, most infants are weaned and are eating a variety of foods included in the Food Value Chart.

² For further description of the activity of this "reference" man, consult Recommended Dietary Allowances, revised 1953, National Research Council Publication No. 302.

Table 2. Amount of Each Nutrient Which the National Research Council*

Recommends for Each Member of the Family.

Only the Nutrients Listed in this Food Value Chart Are Included

			F 1		Min	erals		Vita	mins	
Age	Weight	Height	Food Energy Calories†	Pro- tein	Cal- cium	Iron	A	Thia- mine	Ribo- flavin	
Men	1Ь.	in.		gm.	gm.	mg.	I. U.	mg.	mg.	mg.
25	143	67	3200+	65	0.8	12	5000	1.6	1.6	75
45	143	67	2900	65	0.8	12	5000	1.4	1.6	75
65	143	67	2600	65	0.8	12	5000	1.2	1.6	75
Women										
25	121	62	2300+	55	0.8	12	5000	1.2	1.4	70
45	121	62	2100	55	0.8	12	5000	1.0	1.4	70
65	121	62	1800	55	0.8	12	5000	1.0	1.4	70
Pregnant	(last 3	mo.)	Add 400	80	1.5	15	6000	1.5	2.0	100
Nursing	(28 fl. o.	z.)	Add 1000	100	2.0	15	8000	1.5	2.5	150
Children	up to 9	years‡								
10 mo 1	yr. \$ 22	30	lb. x 45	lb. x 1.6	1.0	6	1500	0.5	0.9	30
1-3	1 27	34	1200	40	1.0	7	2000	0.6	1.0	35
4-6	40	43	1600	50	1.0	8	2500	0.8	1.2	50
7-9	59	51	2000	60	1.0	10	3500	1.0	1.5	60
Boys‡										
10-12	78	57	2500	70	1.2	12	4500	1.3	1.8	75
13-15	108	64	3200	85	1.4	15	5000	1.6	2.1	90
16-20	139	69	3800	100	1.4	15	5000	1.9	2.5	100
Girls‡										
10-12	79	57	2300	70	1.2	12	4500	1.2	1.8	75
13-15	108	63	2500	80	1.3	15	5000	1.3	2.0	80
16-20	120	64	2400	75	1.3	15	5000	1.2	1.9	80

- National Research Council Publication No. 302, Recommended Dietary Allowances, revised, 1953.
- † Values in this column indicate roughly the relative calorie needs of various family members. Allowances for young adults may be too high for "white-collar" workers. Calorie intake is adequate for children if they grow normally; for adults if they maintain a satisfactory weight.
- ‡ Allowances for children are based on the needs for the middle year in each group (as 2, 5, 8, etc.) and are for moderate activity and for the height and weight stated.
- § In this table, allowances for younger infants have been omitted. At 10 months most infants are weaned, and are eating a variety of foods included in the Food Value Chart.

Niacin has been omitted from the Food Value Chart and from tables 1 and 2, because a liberal intake of good quality proteins will make up for a lack of niacin in the diet. Vitamin D has been omitted since it may be obtained from exposure to sunshine as well as from food.

Published by the New York State College of Home Economics at Cornell University, Ithaca, New York. M. C. Bond, Director of Extension. Published and distributed in furtherance of the purposes provided for in the Acts of Congress of May 8 and June 30, 1914.